

PROCEEDINGS
OF THE
BIOLOGICAL SOCIETY OF WASHINGTON

A LIST OF PLANTS COLLECTED ON ST. VINCENT
ISLAND, FLORIDA.

BY W. L. MCATEE,
U. S. BIOLOGICAL SURVEY.

St. Vincent Island, Florida, lies about 8 miles southwest of Apalachicola. It is the westernmost of a series of islands which bound St. George's Sound, and its western extremity, at Indian Pass, is scarcely a quarter of a mile from the mainland. The island contains about 1200 acres, and on all parts of it (except marsh) visited by the writer, the soil is practically pure sand. That part of the island nearest the mouth of the Apalachicola River, which is said to have the richest soil, and where a greater variety of mainland plants would be expected, was not explored.

A number of large ponds on the island drain through a channel which was dammed many years ago. The dam was allowed to disintegrate, but was renewed and has now been in place again for several years. The ponds therefore have at least twice changed from brackish to fresh water.

The plants reported upon were collected during investigations of the food habits of wild ducks, under authority of the Biological Survey. The writer was most hospitably entertained by Dr. R. V. Pierce, owner of the island. Doctor Pierce maintains the island as a game preserve, and is especially interested in improving the supply of food for ducks. A number of plants have therefore been introduced.

St. Vincent Island was a favorite collecting ground of Dr. A. W. Chapman, and no one regrets more than the writer that the worthy doctor did not see fit to label his specimens

more precisely. It is probable that a good proportion of his west Florida specimens came from St. Vincent, and if we could tell which, the flora of the island would undoubtedly now be well known. It is related that the doctor once was called to the island to set a broken leg. As some time was consumed in making the trip for the doctor and bringing him back, the patient was in considerable pain upon his arrival. After the leg was set and bandaged the patient requested the doctor to remain with him and make every effort to relieve the pain. However, Doctor Chapman, after remarking that pain was only natural in such cases and he had done all he could, lost no time in striking out through the woods to collect plants.

The writer was on St. Vincent Island from January 7 to January 14, and from October 30 to November 6, 1910, neither period a very favorable one for plant collecting. However, much was learned as to the time when mature fruits are present, and this data is presented in detail. Definite information on the ripening season is usually very scarce in plant lists. The only English names of plants given are a few unusual ones current on the island. The list includes 239 species of specifically identified indigenous plants, 10 whose identity is more or less in doubt, and 12 introduced species. One unidentified plant not listed is *Chara* sp. It figures as a wild duck food and is known as "musk grass." Tuber-bearing specimens have been collected in October.

The writer acknowledges, with gratitude, his indebtedness for determinations of specimens or other assistance, to a number of botanists including Mrs. Agnes Chase, Mr. H. H. Bartlett, Dr. E. L. Greene, Professor A. S. Hitchcock, Dr. John K. Small, Mr. Paul R. Standley, and Mr. Ivar Tidestrom.

OSMUNDACEAE.

Osmunda spectabilis Willd.

Osmunda cinnamomea L. The tufts of tomentum at bases of leaflets entirely disappear from old plants.

POLYPODIACEAE.

Pteridium aquilinum (L.) Kuhn.

Dryopteris thelypteris (L.) A. Gray.

PINACEAE.

Pinus caribaea Morelet. The dominant tree of the island. Never having been boxed for turpentine, forests of it still present a fine appearance.

JUNIPERACEAE.

Juniperus barbadensis L.

TYPHACEAE.

Typha latifolia L.

NALADACEAE.

Zannichellia palustris L. In fruit March 20, 1911. Sometimes has small, somewhat lobed tubers at the base of the stems.

Ruppia maritima L. Puldoo grass. As a result of damming the outlet of a series of large ponds on St. Vincent, some years ago, a considerable proportion of these waters is now fresh. Corresponding to this change, *Ruppia* as a dominant growth has become restricted to ponds which, due to occasional tidal overflow, or seepage, are somewhat brackish. However, luxuriant growths of it have been noted in purely fresh water. Seeds were found in the stomachs of ducks collected from January 7 to January 14, 1910, and much new seed had already ripened, March 18, 1911.

Potamogeton lucens L. Not plentiful, local. Fruit not quite mature, August, 1910; an abundance ripe, October 3. Probably introduced with the following:

Potamogeton perfoliatus L. Widely but sparingly distributed. Introduced from Currituck Sound, N. C.

Potamogeton pusillus L. Abundant. Probably introduced.

Potamogeton pectinatus L. Widely distributed and abundant. Introduced from Currituck Sound, N. C., and Cayuga Lake, N. Y. Seeds ripe, October 3, 1910; tubers plentiful, December 23.

ZOSTERACEAE.

Zostera marina L. Transplanted from lagoons on mainland off Indian Pass to an almost enclosed shallow bay on St. Vincent.

NALADACEAE.

Najas flexilis (Willd) Rostk. and Schmidt. Probably introduced.

ALISMACEAE.

Sagittaria platyphylla (Engelm.) J. G. Smith. Propagated from a stock of tubers, the original ones of which were secured in the Mississippi Delta, La.

Sagittaria papillosa Buch. Common. Flowers and immature fruit, October 30, 1910; mature fruit, January 14 and October 30.

Sagittaria latifolia Willd. Introduced from Carleton, Ore.

ELEODACEAE.

Vallisneria spiralis L. Abundant. Introduced from Currituck Sound, N. C., and Oshkosh, Wis.

POACEAE.

- Erianthus saccharoides* Michx. Mature fruit, November 2.
- Schizachyrium maritimum* (Chapm.) Nash. Immature fruit, October 30. The fleshy root stock is usually about 4 inches beneath the surface.
- Andropogon glomeratus* (Walt.) B. S. P. Mature fruit, October 30. This is a conspicuous plant just back of the beach and in open places generally.
- Andropogon capillipes* Nash. Immature fruit, October 30.
- ? *Sorghastrum linneanum* (Hack.) Nash. Grain fallen, October 30.
- Paspalum distichum* L.
- Paspalum vaginatum* Sw. Immature fruit, October 30.
- Syntherisma sanguinale* (L.) Dulac. Ripe fruit, some fallen, October 30.
- Echinochloa crus-galli* (L.) Beauv. Ripe fruit, October 30.
- Echinochloa walteri* (Pursh.) Nash. Ripe fruit, October 30.
- Panicum virgatum* L. Ripe fruit, mostly fallen, October 31.
- Panicum amarulum* Hitchc. and Chase. Abundant on the crest of the beach. Seeds said to be a good dove food. Immature fruit, October 30.
- Panicum arenicoloides* Ashe. Grain hard but the glumes still green, October 31.
- Panicum erectifolium* Nash. Ripe fruit, mostly fallen, October 31.
- Panicum commutatum* Schult. Nearly mature fruit, October 30.
- Sarciolepis striata* (L.) Nash. In flower, October 30.
- Chaetochloa imberbis* (Poir.) Scribn. Nearly mature fruit, October 31, November 6; quite ripe, October 30.
- Chaetochloa viridis* (L.) Scribn. Ripe fruit, October 30.
- Chaetochloa magna* (Griseb.) Scribn. Ripe fruit, October 30, 1910. Also October 8, 1911, when blackbirds and teal were observed feeding upon it.
- Cenchrus carolinianum* Walt. Both immature and mature fruits, November 2. One fact relating to this plant, while not of botanical interest, is none the less marvelous. It is almost inconceivable that any animal can eat a plant filled with the well defended fruits that characterize *Cenchrus*. The spines strike into human flesh at the least chance and are hard to pull out; one would think no mucous membrane could possibly endure them. Yet cattle and especially mules munch them down in perfect unconcern.
- Zizania aquatica* L. Introduced from northern Minnesota, Oshkosh, Wis., and the Apalachicola River, Fla. Little success was had except with the last lot. Seed ripening, October 8, 1911.
- Oryza sativa* L. One small colony which probably originated from some waste stock food, appears to be well established.
- ? *Aristida mohrii* Nash. Covers hundreds of acres. Both immature and mature fruit, November 2.
- Aristida gyrans* Chapm. Ripe fruits, mostly fallen, October 31.
- Aristida spiciformis* Ell. Both immature and mature fruits, November 4.

Muhlenbergia filipes M. A. Curtis. This grass covers large areas just back of the beach, and its purple tops form veritable clouds of color. Plants not yet in bloom, and others with ripe seeds were found on October 30.

Sporobolus indicus (L.) R. Br. Ripe fruits, October 30.

Capriola dactyloa (L.) Kuntze. Running in sand, the leaves barely exerted from the sheaths, November 1.

Spartina glabra Muhl.

Spartina bakeri Merrill. Grain formed but not filled, October 30.

Chloris petraea (Sw.) Desv. Fruits mature, mostly fallen, October 30.

Leptochloris fascicularis (Lam.) A. Gray. Both immature and mature fruits, October 31.

Monanthochlœa littoralis Engelm. Seeds found in several duck gizzards collected January, 1911.

Phragmites phragmites (L.) Karst. Cane. Immature fruits, October 31.

Eragrostis probably *refracta* (Muhl.) Scribn. All fruits had fallen from the tall culms of a clump collected October 30, while a short new stalk from the roots bore immature seeds.

Uniola paniculata L. Sea oats.

CYPERACEAE.

Cyperus compressus L. Ripe akenes, October 30.

Cyperus virens Michx. Akenes fallen, January 9.

Cyperus surinamensis Rottb. Ripe akenes, October 30.

Cyperus haspan L. Ripe akenes, mostly fallen, October 30.

Cyperus esculentus L. In flower, October 31.

Cyperus ferox Vahl. Ripe akenes, October 30.

Cyperus cylindricus Boeckl. Ripe akenes, mostly fallen, October 31.

Cyperus echinatus (Ell.) Wood. Akenes fallen, October 31; akenes hardly formed, November 2.

Euirena scirpoidea Michx. Akenes fully ripe, November 2.

Euirena hispida Ell. Akenes fully ripe, November 2.

Scirpus americanus Pers. Akenes fully ripe, November 2.

Scirpus validus Vahl. In flower, October 31.

Scirpus lacustris L. Ripe akenes, January 10.

Scirpus robustus Pursh. Akenes fully ripe, November 6, partly fallen, October 31, mostly fallen, January 14.

Eleocharis cellulosa Torr. Ripe akenes, November 1.

Eleocharis acicularis (L.) R. & S. Unopened flowers, October 31.

Eleocharis albida Torr. Ripe akenes, October 31.

Fimbristylis spadiacea (L.) Vahl. Akenes partly fallen, October 30; nearly all fallen, January 7.

Fimbristylis castanea (Michx.) Vahl. Akenes mostly fallen, October 31.

Fimbristylis frankii Steud. Ripe akenes, October 31.

Stenophyllus capillaris (L.) Britton. Ripe akenes, October 31.

Psilocarya nitens (Vahl.) Wood. Spikes half bare, November 2.

Dichromena colorata (L.) Hitchc. Ripe akenes, October 30.

Cladium effusum (Sw.) Torr. Saw grass. Fringes all bodies of water on the island. Ripe akenes, January 7 to 14.

Rhynchospora corniculata (Lam.) A. Gray. Both immature and mature akenes, November 2.

Rhynchospora fascicularis (Michx.) Vahl. Ripe akenes, November 2.

Rhynchospora dodecandra Baldw. Ripe akenes, mostly fallen, November 2.

Rhynchospora caduca Ell. Ripe akenes, November 2.

Rhynchospora microcarpa Baldw. Ripe akenes, October 31.

Scleria triglomerata Michx. Akenes fallen, October 30.

Scleria reticularis Michx. var. *pubescens* Britton. Ripe akenes, November 2.

ARECACEAE.

Sabal palmetto (Walt.) R. & S. Abundant.

Serenoa serrulata (Michx.) Hook. Abundant.

ARACEAE.

Orontium aquaticum L.

LEMNACEAE.

Lemna present, species undetermined.

XYRIDACEAE.

Xyris iridifolia Chapm. Ripe seeds, November 2.

Xyris arenicola Small. Ripe seeds, November 2 and 4.

ERIOCAULACEAE.

Eriocaulon decangulare L.

COMMELINACEAE.

Tradescantia virginiana L. Flowers and ripe seeds, October 31.

PONTEDERIACEAE.

Heteranthera reniformis R. & P.

Pontederia cordata L. Flower buds, October 30; seeds in duck stomachs, January 9.

BROMELIACEAE.

Dendropogon usneoides (L.) Raf. Ripe capsules, October 31.

JUNCACEAE.

Juncus aristulatus Michx. Ripe seeds, October 31.

Juncus megacephalus M. A. Curtis. Ripe seeds, October 30.

Juncus scirpoides Lam. Ripe seeds, November 2 and January 7.

DRACAENACEAE.

Yucca recurvifolia Salisb. Old fruits on ground, seeds intact, June, 1912.

Yucca aloifolia. Ripe seeds, November 6.

SMILACACEAE.

Smilax bona-nox L. Ripe fruit, November 2.

Smilax beyrichii Kunth. A conspicuously abundant plant. Much browsed by deer.

HAEMADORACEAE.

Gyrotheca tinctoria (Walt.) Salish. Ripe seeds, November 2.

CANNACEAE.

Canna flaccida Roscoe. Ripe seeds, November.

MARANTACEAE.

Thalia divaricata Chapm. Flowers, November 2; flowers and ripe seeds, October 31; seeds fallen, January 9. Transplanted by roots with fair, and by the seeds with excellent success.

Saururaceae.

Saururus cernuus L.

JUGLANDACEAE.

Hicoria ovata (Mill.) Britton.

Hicoria glabra (Mill.) Britton.

MYRICACEAE.

Morella pumila (Michx.) Small.

Morella cerifera (L.) Small. Ripe fruit, October 31.

SALICACEAE.

Salix longipes Shuttlew.

FAGACEAE.

Quercus laurifolia Michx. Water oak. Mature acorns, October 30.

A tree 10 to 12 inches in diameter was observed to bear exclusively leaves of the pinnatifid type said to be characteristic of shoots (specimen No. 1743B).

Quercus minima (Sarg.) Small.

Quercus virginiana Mill.

POLYGONACEAE.

Rumex hastatulus Baldw. In flower, October 30.

Polygonella brachystachya Meisn. In flower, November 2.

Polygonella gracilis (Nutt.) Meisn. Flowers and immature akenes, October 30.

Persicaria lapathifolia (L.) S. F. Gray.

Persicaria punctata (Ell.) Small. Flowers and immature fruit, October 30 to November 2; mature akenes, October 30; flowers only, October 31 and January 9.

Tracaulon sagittatum (L.) Small. Seeds in duck gizzards, January 10.

CHENOPODIACEAE.

Atriplex arenaria Nutt. Abundance of mature fruits, November 1.

Salicornia ambigua Michx. Seeds fallen, November 2.

AMARANTHACEAE.

Aenida cannabina L. var. *australis* A. Gray. Immature fruits, October 30.

Aenida tuberculata Moq. Both flowers and ripe fruits collected, October 30.

Froslichia floridana (Nutt.) Moq.

CORRIGIOLACEAE.

Odontonychia erecta (Chapm.) Small.

TETRAGONIACEAE.

Mollugo verticillata L. (?) The single specimen collected combines the characters of *verticillata* and *cerviana*, having linear to oblong and spatulate leaves, and the seeds faintly ridged as well as reticulated. Ripe capsules, October 31.

Sesuvium portulacastrum L. Ripe fruit, November 1.

CERATOPHYLLACEAE.

Ceratophyllum demersum L. Seeds in duck stomachs, January 10. Chapman records * *C. echinatum* A. Gray from St. Vincent. It is probable that little harm would be done by regarding all *Ceratophyllums* in North America as belonging to a single variable species.

MAGNOLIACEAE.

Magnolia foetida (L.) Sarg. Numerous trees are present on the south side of the island.

NELUMBOACEAE.

Nelumbo lutea (Willd.) Pers. Several acres in one of the ponds are occupied by this plant. Ripe seeds, partly fallen, October 8, 1911.

NYMPHEACEAE.

Castalia odorata (Dryand) Woody. and Wood. For the present all of the water lilies collected are placed under this name. There seem to be two kinds, however, one with larger leaves, the edges of which are coarsely toothed, and with larger flowers on stouter peduncles. Seeds in duck stomachs, January 10.

Castalia mexicana Zucc. Introduced.

BRASSICACEAE.

Cakile edentula (Bigel.) Hook. Ripe fruits, leaves fallen, November 1.

ROSACEAE.

Rubus trivialis Michx.

CASSIACEAE.

Chamaecrista bellula Pollard. Both flowers and ripe fruit, October 30. Originally described † from St. Vincent specimens (September 9, 1899, S. M. Tracy).

FABACEAE.

Lupinus diffusus Nutt. Lavender. Seeds fallen, October 31.

Sesban macrocarpa Muhl. Coffee weed. Ripe pods, October 30.

Amorpha fruticosa L. Ripe pods, November 2.

Meibomia stricta (Pursh) Kuntze. Pods full sized but not filled, November 2.

* Flora of the Southern U. S., 1860, p. 398.

† Proc. Biol. Soc. Wash., 15, 1902, pp. 19-20.

Meibomia paniculata pubens (T. & G.) Vail. Ripe pods, October 30.

Meibomia viridiflora (L.) Kuntze. Ripe pods, October 30, 31.

Lespedeza hirta (L.) Ell. Ripe pods, October 30.

Lespedeza capitata Michx. Ripe pods, November 2.

Dolicholus minimus (L.) Medic. Ripe pods, November 2.

Erythrina herbacea L. Coral vine. Ripe pods, January 16.

Galactia regularis (L.) B. S. P. Ripe pods, November 2.

Galactia volubilis (L.) Britton. Ripe pods, November 2.

Bradburya virginiana angustifolia (Griseb.) Small. Ripe pods, October 31.

Canaralia obtusifolia (Lam.) D. C. Sea bean. Both flowers and ripe pods, November 6. Recorded from St. Vincent by Chapman.*

Vicia acutifolia Ell. Flowers and immature pods, November 6.

OXALIDACEAE.

Oralis cymosa Small.

RITACEAE.

Fagara clara-herculis (L.) Small.

POLYGALACEAE.

Polygala brevifolia Nutt. Flowers and ripe seed, November 2.

Polygala lutea L. Flowers, November 4.

Polygala baldwinii Nutt. Flowers, November 2.

EUPHORBIACEAE.

Croton punctatus Jacq. Dove-weed. So called because mourning doves are very fond of the seeds. Ripe seeds, October 30.

Acalypha virginica L. Nearly ripe seeds, October 30.

Stillingia aquatica Chapm.

Unidoscolus stimulosus (Michx.) A. Gray. Flowers, November 5, ripe seeds, October 30.

Chamaesyce maculata (L.) Small. Immature fruits, October 30.

Chamaesyce nutans (Lag.) Small. [*hypericifolia*]. Flowers and immature fruits, November 6.

EMPETRACEAE.

Ceratiola ericoides Michx.

ANACARDIACEAE.

Rhus radicans L. Seeds in duck gizzards, January 10.

Rhus copallina L. Ripe fruit, October 30.

AQUIFOLIACEAE.

Ilex glabra (L.) A. Gray. Gall berry; gall ring berry. Both immature and mature fruit, November 2; ripe fruit, November 4.

Ilex vomitoria Ait.

Ilex opaca Ait. Only two clumps known on the island. Fruit not quite ripe, November 4.

VITACEAE.

Vitis rotundifolia Small.

* Flora 1860, p. 109.

Cissus incisa Desmoul. Recorded by Chapman;* fruits in November.
Ampelopsis arborea (L.) Rusby. Ripe fruit, October 31.

MALVACEAE.

? *Hibiscus incanus* Wendl. Wild cotton. Seeds fallen, October 30.

HYPERICACEAE.

Ascyrum hypericoides L. Ripe capsules, October 30.
Ascyrum tetrapetalum (Lam.) Vail. Flowers, immature and mature capsules, October 30.
Ascyrum linifolium Spach.
Hypericum ambiguum Ell. All stages from flowers to ripe capsules, November 4.

CISTACEAE.

Lechea minor L. Ripe capsules, October 30.

OPUNTiaceAE.

Opuntia pes-corvi Le Conte.

LAURACEAE.

Persea borbonia (L.) Spreng.
Persea pubescens (Pursh.) Sarg. Ripe fruit, November 2.

LYTHRACEAE.

Ammannia coccinea Rothb. Both immature and mature fruits, October 31 and November 3.

ONAGRACEAE.

Isnardia palustris L.
Ludwigia alternifolia L. Ripe capsules, October 31.
Oenothera humifusa Nutt. All stages from flowers to mature fruit, November 2.
Gaura angustifolia Michx. Immature fruit, October 30.

GUNNERACEAE.

Proserpinaca pectinata Lam.
Myriophyllum. Present, species not determined.

UMBELLIFERAE.

Hydrocotyle umbellata L.
Hydrocotyle ranunculoides L.
Centella repanda (Pers.) Small.

ERICACEAE.

Kalmia hirsuta Walt. All stages from flowers to opened capsules, November 4.
Zenobia pulverulenta (Willd.) Pollard.
Pieris nitida (Bartr.) B. & H. Ripe capsules, November 2.
Xolisma fruticosa (Michx.) Nash.

VACCINIACEAE.

Gaylussacia dumosa (Andr.) T. & G.
Gaylussacia frondosa (L.) T. & G.

* Flora 1860, p. 70.

Batodendron arboreum (Marsh.) Nutt.

Polycodium stamineum (L.) [*sensu lato*]. Flowers, October 30.

Vaccinium myrsinites Lam.

ARMERIACEAE.

Limonium nashii Small. Flowers, November 3. This form seems to be little if any different from *carolinianum*.

EBENACEAE.

Diospyros virginiana L.

OLEACEAE.

Osmanthus americana (L.) B. & H. Black haw.

SPIGELIACEAE.

Polypremum procumbens L. Seeds fallen, October 30.

GENTIANACEAE.

Sabbatia dodecandra (L.) B. S. P. Flowers, November 4.

CONVOLVULACEAE.

Ipomoea littoralis (L.) Boiss.

Ipomoea pes-caprae (L.) Sweet. Railroad vine. This vine grows on the beach as near the water as it is able to maintain itself, and upon the first ridge back of the beach. It is an efficient sand binder. Nearly mature fruit, October 30.

Ipomoea speciosa Walt. Mature fruit, October 30.

USCUTACEAE.

Cuscuta compacta Juss. Flowers, November 2.

SOLANACEAE.

Physalis angulata L. Mature fruit, October 30.

Physalis angustifolia Nutt. Both immature and mature fruits, November 1.

HELIOTROPACEAE.

Heliotropium indicum L. Seeds found in duck stomachs, collected January, 1910.

VERBENACEAE.

Verbena urticaefolia L. Mature fruit, October 31.

Callicarpa americana L.

LAMIACEAE.

Teucrium nashii Kearney. Flowers, October 31 and November 6; mature akenes, October 31.

Trichostema dichotomum L. Akenes ripe, mostly fallen, October 31.

Monarda punctata L. Flowers, October 31.

Conradina canescens (T. and G.) A. Gray. Flowers, October 30.

Mesosphaerum rugosum (L.) Pollard. Akenes fallen, November 2.

RHINANTHACEAE.

Monniera monniera (L.) Britton. Ripe capsules, October 30.

? *Gerardia plukenetii* Ell. Flowers and dehiscent capsules, October 31.

Gerardia setacea Walt. Flowers and dehiscent capsules, November 4.

PINGUICULACEAE.

Utricularia oligosperma St. Hil. Flowers, October 30.

?*Utricularia gibba* L. Flower buds, October 30.

Utricularia macrorhyncha Barnhart. Flowers and ripe capsules, October 30.

RUBIACEAE.

Cephalanthus occidentalis L. Immature fruits, October 30.

Diodia teres Walt. Carpets areas once cultivated and is common elsewhere. Ripe fruits, October 30.

Galium hispidulum Michx. Ripe fruits, November 1.

LOBELIACEAE.

Lobelia brerifolia Nutt. Flowers and ripe capsules, November 2.

AMBROSIACEAE.

Ambrosia artemisiifolia L. Flowers, October 30.

Iva frutescens L. Horse brush. Abundant along narrow channels; rather easily killed by a rise in the level of the water. All stages from flowers to nearly mature akenes, November 1.

CARDUACEAE.

Eupatorium serotinum Michx. Ripe akenes, October 30.

Eupatorium sp. nov.? (No. 1781 A). With opposite, petioled leaves which are several times longer than broad, this species comes near *serotinum*, but the leaves are almost entire, being merely undulate. Flowers to ripe akenes, some fallen, October 31.

Eupatorium mikanioides Chapm. Akenes practically all fallen, October 30. Originally described from St. Vincent.*

Eupatorium tortifolium Chapm. Immature akenes, November 2.

Eupatorium rotundifolium L. Ripe akenes, November 2.

Willughbaeya scandens (L.) Kuntze. Flowers to ripe akenes, October 30.

Trilisa odoratissima (Walt.) Cass. Flowers to ripe akenes, November 2.

Laciniaria tenuifolia (Nutt) Kuntze. Both immature and mature akenes, November 2.

Laciniaria chapmanii (T. & G.) Kuntze. Flowers and immature akenes, October 30.

Heterotheca subacillaris (Lam.) Britt & Rusby. All stages from flowers to bare receptacles, October 30.

Chrysopsis graminifolia (Michx.) Nutt. Flowers to immature akenes, November 2.

Chrysopsis decumbens Chapm. Flowers to immature akenes, October 30. Originally described from St. Vincent.†

Chrysoma pauciflorescens (Michx.) Greene. Immature akenes, October 30.

Euthamia graminifolia (L.) Nutt. Immature akenes, October 30.

* Flora 1860, p. 195.

† Flora 1860, p. 217.

Solidago chrysopsis Small. Flowers, October 30.

Solidago stricta Ait. Flowers to ripe akenes, October 30 and November 3.

Solidago angustifolia Ell. Flowers to ripe akenes, October 30. Flowers, January 11.

Solidago chapmani A. Gray. Flowers to ripe akenes, October 30.

Aster coridifolius Michx. Flowers to ripe akenes, November 2.

Aster exilis Ell. Flowers to ripe akenes, October 30.

Baccharis halimifolia L. Flowers, October 30; ripe akenes, October 31.

Baccharis angustifolia Michx. Ripe akenes, November 2.

Pluchea foetida (L.) B. S. P. Ripe akenes, many fallen, October 30.

Pluchea imbricata (Kearney) Nash. Flowers to immature akenes, October 30.

Pluchea petiolata Cass. Flowers to immature akenes, October 30.

Gnaphalium obtusifolium L. Ripe akenes, October 30.

Borrichia frutescens (L.) D. C. Ripe akenes, November 3.

Helianthus debilis Nutt. Flowers to ripe akenes, October 30.

Coreopsis longifolia Small. Flowers to ripe akenes, November 2.

Bidens cernua L. Flowers to ripe akenes, October 30. Colonies of this plant made beautiful yellow spots in the sombre green marsh.

Erechtites hieracifolia (L.) Raf. Ripe akenes, many receptacles bare, October 30 and November 6.